

REMARKS

This application has been reviewed in light of the final Office Action dated May 30, 2007. Claims 16 and 18-26 are pending, with Claims 16 and 21 in independent form. No changes have been made to the claims by this response. Favorable reconsideration is respectfully requested.

Claims 16 and 21-23 stand rejected under 35 U.S.C. §103(a) as allegedly unpatentable over U.S. Patent No. 5,936,684 (Murayama) in view of U.S. Patent No. 5,649,025 (Revankar). Claims 18 and 24 stand rejected under 35 U.S.C. §103(a) as allegedly unpatentable over U.S. Patent No. 5,936,684 (Murayama) in view of U.S. Patent No. 5,649,025 (Revankar) and further in view of U.S. Patent No. 6,501,566 (Ishiguro). Claim 19 stands rejected under 35 U.S.C. §103(a) as allegedly unpatentable over U.S. Patent No. 5,936,684 (Murayama) in view of U.S. Patent No. 5,649,025 (Revankar) and further in view of U.S. Patent No. 4,945,478 (Merickel) and in view of 5,565,994 (Eschbach). Claim 20 stands rejected under 35 U.S.C. §103(a) as allegedly unpatentable over U.S. Patent No. 5,936,684 (Murayama) in view of U.S. Patent No. 5,649,025 (Revankar), and further in view of U.S. Patent No. 4,945,478 (Merickel) and in view of 5,565,994 (Eschbach) and lastly in view of U.S. Patent No. 5,621,546 (Klassen). Claim 25 stands rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,936,684 (Murayama) in view of U.S. Patent No. 5,649,025 (Revankar) and further in view of U.S. Patent No. 5,565,994 (Eschbach). Claim 26 stands rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,936,684 (Murayama) in view of U.S. Patent No. 5,649,025 (Revankar) and further in view of U.S. Patent No. 5,565,994 (Eschbach) and lastly in view of U.S. Patent No. 5,621,546 (Klassen).

Applicants respectfully submit that the claims are patentable over the rejecting references taken separately or in any proper combination for at least the following reasons.

Independent Claim 16 requires a method for multitone processing an N level digital image to produce an M level digital image. M and N have unchanging values and $M < N$. The method includes clustering all of the pixel values of the N level image into M reconstruction levels based on the gray level distribution of the N level image. The clustering produces K clusters of pixel values, and wherein $K = M$; repeatedly revising the K clusters of pixel values until

error between the N level digital image and the M level digital image is minimized. Throughout the repeated revising of said K clusters, the number of clusters K does not change. The method also includes applying multilevel error diffusion to the N level digital image using the M reconstruction levels to produce the M level digital image, and applying the M level digital image to an image output device.

For purposes of the following discussion, Applicants will assume, merely for argument's sake, that the Office Action's interpretations of the Murayama Patent and the Revankar Patent are correct and agreed upon. With that said, the Office Action states that the Murayama Patent "does not disclose expressly repeatedly revising said K clusters" See the third full paragraph on page 3 of the Office Action. The Office Action also states that the Murayama Patent "discloses that the number of clusters K is set constant" See the first full paragraph on page 3 of the Office Action. It appears, then, that the Office Action is reasoning that if the Murayama Patent does not repeatedly revise its K clusters, it follows then that the number of clusters K must be constant. Assuming, merely for argument's sake, that the Office Action has properly interpreted the Murayama Patent, Applicants do not disagree with this line of reasoning.

What Applicants do respectfully disagree with is the Office Action's suggested modification of the teachings of the Murayama Patent by the teachings of the Revankar Patent, which are relied upon to teach the repeated revising of Claim 16. In particular, Applicants respectfully submit that the Revankar Patent teaches the changing of the number of clusters K during its 'repeated revising.' See the last paragraph of page 6 of Applicants' Amendment of March 6, 2007.¹ Therefore, if the number of clusters K according to the Murayama Patent, which are deemed to be constant because the Murayama Patent does not 'repeatedly revise', were to be repeatedly revised according to the

¹ "In particular, the Revankar Patent is understood to incrementally generate a plurality of thresholds (which are apparently referred to by the Office Action as corresponding to 'clusters') as part of its recursive thresholding processes 204, 206. See col. 5, lines 6-15 and col. 6, lines 25-31. Of the plurality of thresholds generated by recursion, the Revankar Patent is understood to teach selecting a subset of thresholds meeting 'goodness' criteria. See col. 5, lines 16-40. Accordingly, Applicants understand the Revankar Patent's recursive threshold generation process to increase the number of 'clusters' and its subsequent selection of only a subset of the 'best' thresholds to thereafter decrease the number of 'clusters.' Claim 16, however, requires that throughout its repeated revising of said K clusters, the number of clusters K does not change."

Revankar Patent, such number of clusters K would then be repeatedly revised in a manner that changes the number K, as taught by the Revankar Patent. If the Revankar Patent teaches 'repeated revising' by changing the number K, how could 'repeated revising' be added to the Murayama Patent according to the Revankar Patent without modifying Murayama's value of K?

Accordingly, Applicants respectfully submit that one of ordinary skill in the art would not obviously know how to modify the teachings of the Murayama Patent to include repeated revising of a constant number of clusters K by reading the Revankar Patent, which teaches changing the number of clusters K during its repeated revising.

For at least these reasons, withdrawal of the Section 103(a) rejection of Claim 16 is respectfully requested.

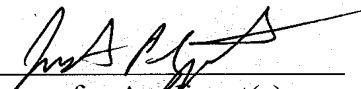
Independent Claim 21 includes the same or similar features as those discussed above in connection with Claim 16 and, therefore, are submitted to be patentable for at least the same reasons.

The other claims in this application depend from one of the independent claims discussed above and, therefore, also are submitted to be patentable for at least the same reasons. Since each dependent claim is deemed to define an additional aspect of the invention, individual reconsideration of the patentability of each claim on its own merits is respectfully requested.

This Response After Final is believed to place this application in condition for allowance and, therefore, its entry is believed proper under 37 C.F.R. §1.116. Accordingly, entry of this Amendment After Final Action, as an earnest effort to advance prosecution and reduce the number of issues, is respectfully requested. Should the Examiner believe that issues remain outstanding, it is respectfully requested that the Examiner contact Applicants' undersigned attorney in an effort to resolve such issues and advance the case to issue.

In view of the foregoing remarks, Applicants respectfully request favorable reconsideration and the allowance of the present application.

Respectfully submitted,



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If the Examiner is unable to reach the Applicant(s) Attorney at the telephone number provided, the Examiner is requested to communicate with Eastman Kodak Company Patent Operations at (585) 477-4656.